

ABSTRACT OF THE DISCLOSURE

The invention provides methods for identifying a polypeptide. The method can include determining two or more characteristics associated with the polypeptide, or a
5 fragment thereof, one of the characteristics being mass of a fragment of the polypeptide, the fragment mass being determined by mass spectrometry; comparing the characteristics associated with the polypeptide to an annotated polypeptide index; and identifying one or more
10 polypeptides in the annotated polypeptide index having the characteristics. The method can further include the steps of determining one or more additional characteristics associated with the polypeptide; comparing the determined characteristics to the annotated polypeptide index;
15 optionally repeating the steps one or more times, wherein a set of characteristics is determined that identifies a single polypeptide in the annotated polypeptide index, and optionally quantitating the amount of identified polypeptide in a sample containing the polypeptide. The invention also
20 provides methods for generating a polypeptide identification index.